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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,959	12/21/2000	Mareike Katharine Klee	PHD 99,195	2130

7590 06/06/2002

Corporate Patent Counsel
U.S. Philips Corporation
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EXAMINER

TAKAOKA, DEAN O

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,959

Applicant(s)

LOBL ET AL.

Examiner

Dean O Takaoka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "carrier layer is removed" (Claim 8) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The applicant is required to provide a copy of the drawings with proposed drawing changes marked in red ink as required by 37 CFR 1.121(d).

The Drawing objection with respect to the "carrier layer" (contained in the previous Office Action of record) is maintained by the Examiner. The Examiner maintains that the "carrier layer" is not shown, even though this layer is eventually removed (e.g. from the "protective layer" identified as reference number 6 shown in Fig. 1). Although the Amendment clarifies the specification for removal of the Si layer, the drawings (e.g. Fig. 1) do not show the "carrier layer" (albeit that this layer is subsequently removed or "etched away").

The Examiner suggests that an additional layer be shown (i.e. added on top of layer 6 - Fig. 1) and labeled as the "carrier layer" to clearly identify a separate layer (from "protective layer" 6) thus clearly defining the two separate layers.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "passivating layer" in claim 8. There is insufficient antecedent basis for this limitation in the claim.

With respect to the specification, reference number 6 (Fig. 1) is referred to as a "protective layer" (page 5, line 16; page 10, line 34; and page 13, line 18) and "carrier layer" (by Amendment page 2 of 8 and inserted into the specification of page 11, lines 4-22). It is unclear if the "passivating layer" is the same as or different from the "protective layer". While the "passivating layer" is discussed in the specification (e.g. page 7, line 22), there is no reference number associated with this layer, thus is unclear if the "protective layer" and "passivating layer" are the same or different. The Examiner
...the term "passivating layer" in the
claim.

It is noted that the Examiner has suggested another layer shown in Fig. 1 to clearly distinguish the "protective layer" 6 from the "carrier layer" (in the Drawings Objections above).

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 4 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ella (U.S. Patent No. 5,910,756).

Claim 1:

Ella (Fig. 13) shows a filter arrangement which comprises a substrate (illustrated by substrate 36 shown in Figs. 1a, et al.) on which are provided a thin film bandpass filter and a thin film notch filter, in which the filters are coupled to one another.

(Ella shows a thin film crystal bandpass filter or duplexer with notches above and below the passband – abstract, spec all. Although the notches of the bandpass filter are incorporated into the design of the bandpass filter of Ella (shown by the frequency response – Fig. 15), the Examiner asserts that the notch and bandpass filter of the current invention, coupled together, would form a single unitary filter and filter frequency response and is not patentably distinct than the filter response of the band pass filter with notches shown by Ella, thus the limitations of a “thin film band pass filter and a thin film notch filter...coupled to one another” are met by Ella).

Claim 2:

The notch filter is connected between the input of the bandpass filter and ground (where the duplexer comprises Tx and Rx band pass filter sections, each having a notches at the upper and lower frequency response and between ground, ground shown between nodes G3 and G4 – Fig. 13)

Claims 4 and 5:

The band pass filter comprises a filter arrangement of resonators;

Where the filter arrangement of resonators comprise bulk acoustic wave resonators (where the BAWR's are resonators).

Claim 6:

Where the bulk acoustic wave resonator comprises a resonator unit and a reflection element which is arranged between the substrate and the resonator unit (where an air gap created by the removal of layer (39 – Fig. 2) lies between the substrate (36) and resonator element and inherently creates a reflection element).

Claim 7.

Where the notch filter comprises a capacitor and inductance (where Ella shows the inductance of the resonator by the equivalent resonant circuit shown in Fig. 10e, further where the capacitor is inherently shown by the individual structure of the BAWR for example in Fig. 2 where the first (24) and second (26) electrodes sandwich piezoelectric element (22) thus inherently comprising a capacitor).

Allowable Subject Matter

under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 4 – 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ella (US '171) – shows a BAWR SCF filter circuit with notches.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O Takaoka whose telephone number is (703) 305-6242. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

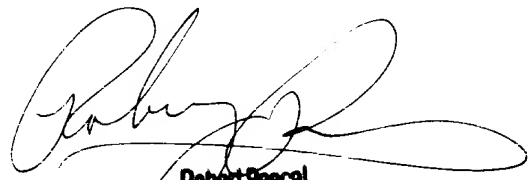
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 308-6251 for regular communications and (703) 308-6251 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dot
June 5, 2002



Robert Pascal
Supervisory Patent Examiner
Technology Center 2817